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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/476,372	01/03/2000	BYOUNG-CHUL SOHN	Q57096	7742

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EXAMINER	
MEHRPOUR, NAGHMEH	
ART UNIT	**PAPER NUMBER**
2686	

DATE MAILED: 12/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/476,372	SOHN, BYOUNG-CHUL	
	Examiner	Art Unit	
	Naghmeh Mehrpour	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *04 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-6 and 8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-6 and 8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/4/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed reference listed in the information Disclosure Submitted on 10/04/05 have been considered by the examiner (see attached PTO-1449

Claim Rejections - 35 USC ∋ 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. **Claims 2,** is rejected under 35 U.S.C. 103(a) as being unpatentable over Buchholz et al. (US Patent Number 5,555, 266) in view of Bauchot et al. (US Patent Number 6,141,336) in further view of Uyesugi et al. (US Patent 5,949,777).

Regarding **Claim 2,** Buchholz teaches a wireless resource allocation method in a wireless communication system including a plurality of wireless terminals and a single access point having a bridge function, the method comprising the steps of:

a) allocating a wireless resource to a corresponding wireless terminal and receiving data from said wireless terminal in said access point (col 3 lines 64-65)

b) performing a check to determine whether there is an error in said data which was received from said wireless terminal in said access point in the step (a) (col 3 lines 65-67).

c) sending an error occurrence message and allocating a wireless resource for retransmission of data to said wireless terminal simultaneously when the access point detects a data error in the step (b) (col 3 lines 67, col 4 lines 1-3). Buchholz does not show one frame comprising the down-link period and an up-link period. However Bauchot teaches that one frame comprising the down-link period and an up-link period (see figures 11, col 3 lines 10-25), in the case of error occurrence when mobile requests the base station for allocation of data transmission. Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to use the above teaching of Bauchot with Buchholz, in order to minimize the deterioration in the transmission efficiency, and reduce the delay time. Buchholz modified by Bauchot fails to teach a wireless resource allocation method in a wireless communication system wherein the step of c) allocates the wireless resources the error occurs in the received data without informing the corresponding wireless terminal of error occurrence. However Uyesugi teaches a wireless resource allocation method in a wireless communication system wherein the step of c) allocates the wireless resources the error occurs in the received data without informing the corresponding wireless terminal of error occurrence. The base station (TSR) informs the WCP that the PC is ready to receive by setting the signal SLCT IN (SELECT INPUT) high. (Signal names and bit positions are standard parallel port designations). This setting is made at installation, and is reset whenever the TSR transitions to the IDLE mode. The WCP sends one nibble at a time, first a low-order nibble (first half of a byte), then a high-order nibble (second half of a byte). Each nibble is strobed in by setting the ACK signal low. When

the TSR is triggered by the signal IRQ7, TSR sets itself in the RECEIVE mode. The TSR acknowledges each nibble by strobing it back. The BUSY, PE (paper error), SLCT OUT (SELECT OUTPUT), and ERROR status lines contain the data nibble. The TSR transmits data to WCP, frame by frame, in the following way. As soon as TSR knows that it needs to send a frame to WCP because buffer is ready, TSR informs WCP that PC is busy, setting SLCT IN signal low. The TSR also sets itself in SEND mode. TSR then strobes out a sync character FF.sub.hex with auto line feed (ALF) low. When TSR receives a hardware ACK (acknowledge) from WCP, TSR checks the SLCT OUT and PE (paper error) status lines. If the status lines are such that PE is high and SLCT OUT is low, TSR considers the handshake a success. If the status lines do not meet this condition, the handshake fails. If the handshake succeeds, TSR strobes 8F.sub.hex to WCP, setting ALF high again. If the handshake has succeeded, TSR expects to start sending a frame when TSR receives the next hardware ACK signal. TSR is triggered to send the Nth byte of data when it receives the N-1th ACK signal. When the correct number of ACK signals has been received, TSR writes a status out to the command-status area, and reverts to IDLE mode, setting SLCT IN high. If the handshake has failed, TSR transitions to IDLE mode (col 9 lines 47-67, col 10 lines 1-7). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to use the above teaching of Uyesugi with Buchholz modified by Bauchot, in order to minimize the deterioration in the transmission efficiency by adjusting the number of bit error rate attempts made to transmit each frame.

4. **Claims 3, 5,** are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchholz et al (US Patent Number 5,555,266) and Bauchot et al. (US Patent Number 6,141,336) in view of Uyesugi et al. (US Patent Number 5,949,777), and in the further view of Johnston (US Patent Number 6,064,649).

Regarding **Claim 3,** Buchholz fails to teach a wireless resource allocation method wherein said downlink period comprises a broadcast period, and a download reservation period. However Bauchot further teaches a wireless resource allocation method wherein said downlink period comprises a broadcast period, and a download reservation period (See figure 11, col 4 lines 37-49, col 5 lines 15-30). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching of Bauchot with Buchholz, in order to overcoming a delay-oriented scheduling system by using the arrival time of the data cells for determining a deadline of each cell before which the cell has to be transmitted in order to meet a required quality of service.

Buchholz modified by Bauchot and Uyesugi fails to teach a wireless resource allocation method wherein said downlink period comprises a preamble for synchronization. However Johnston teaches a wireless resource allocation method wherein said downlink period comprises a preamble for synchronization (col 3 lines 29-39). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching of Johnston with Buchholz modified by Bauchot and Uyesugi, in order to reduce transmission delay and to prevent decreasing an actual data transmission rate.

Regarding **Claim 5,** Buchholz fails to show that a wireless resource allocation method wherein during said down-link period, said access point transmits a broadcast message and various control information. However Bauchot teaches a wireless resource allocation method wherein during said down-link period, said access point transmits a broadcast message and various control information (See figure 11, col 4 lines 37-49, col 5 lines 15-30). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching of Bauchot with Buchholz, in order to overcoming a delay-oriented scheduling system by using the arrival time of the data cells for determining a deadline of each cell before which the cell has to be transmitted in order to meet a required quality of service.

5. .**Claim 4,** is rejected under 35 U.S.C. 103(a) as being unpatentable over Buchholz et al (US Patent Number 5,898,679), and Bauchot et al. (US Patent Number 6,141,336) in view of Uyesugi et al. (US Patent Number 5,889,772) in the further view of Patel (US Patent Number 5,953,706).

Regarding **claim 4,** Buchholz modified Bauchot and Uyesugi fails to teach a wireless resource allocation method wherein the up-link period comprises a contention period and an upload preservation period. However Patel teach a wireless resource allocation method wherein the up-link period comprises a contention period and an upload preservation period (col 3 lines 59-65-col 4 lines 1-10). Therefore, it would have been

obvious to ordinary skill in the art at the time the invention was made to combine the above teaching of Patel with Buchholz modified by Bauchot and Uyesugi, in order to provide a system with less error by reducing the stages where data is manually relayed and transcribed by various service providers.

6. **Claim 6,** is rejected under 35 U.S.C. 103(a) as being unpatentable over Buchholz et al (US Patent Number 5,555,266) and Bauchot et al. (US Patent Number 6,141,336) and Uyesugi et al. (US Patent Number 5,949,777), in view of Johnston (US Patent Number 6,064,649) in the further view of Patel (US Patent Number 5,953,706).

Regarding **claim 6,** Buchholz modified by Bauchot, Uyesugi and Johnston fails a wireless resource allocation method wherein various control information includes not acknowledge information the wireless terminal transmitted to the access point during the upload reservation period of a previous frame. However Patel teaches a wireless resource allocation method wherein an acknowledge information or not acknowledge information the wireless terminal transmitted to the access point during the upload reservation period of a previous frame (col 6 lines 35-51). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching of Patel with Buchholz, Bauchot and Uyesugi modified by Johnston, by centrally control network reduce the cost of the telephone communication, and provide more availability of services to users, because not every service provider will have a relationship with a counterpart service provider in every other city.

7. **Claim 8,** is rejected under 35 U.S.C. 103(a) as being unpatentable over Buchholz et al. (US Patent Number 5,555,266) in view of Uyesugi et al (US Patent Number 5,889,772).

Regarding **Claim 8,** Buchholz teaches a wireless resource allocation method in a wireless communication system including a plurality of wireless terminals and a single access point having a bridge function, the method comprising the steps of:

a) allocating a wireless resource to a corresponding wireless terminal and receiving data from said wireless terminal in said access point (col 3 lines 64-65)

b) performing a check to determine whether there is an error in said data which was received from said wireless terminal in said access point in the step (a) (col 3 lines 65-67).

c) sending an error occurrence message and allocating a wireless resource for retransmission of data to said wireless terminal simultaneously when the access point detects a data error in the step (b) (col 3 lines 67, col 4 lines 1-3). Buchholz fails to teach a wireless resource allocation method in a wireless communication system wherein the step of c) allocates the wireless resources the error occurs in the received data without informing the corresponding wireless terminal of error occurrence. However, Uyesugi teaches a wireless resource allocation method in a wireless communication system wherein the step of c) allocates the wireless resources the error occurs in the received data without informing the

corresponding wireless terminal of error occurrence (col 12 lines 65-67, col 13 lines 1-22). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to use the above teaching of Uyesugi with Buchholz, in order to minimize the deterioration in the transmission efficiency by adjusting the number of bit error rate attempts made to transmit each frame.

Response to Arguments

8. Applicant's arguments filed 10/04/05 have been fully considered but they are not persuasive.

In response to the applicant's the error that occurs in claim 2 is the error in the data that is received from a wireless terminal in the access point.

The Examiner asserts that the TSR is ae communication source which communicates with WCP, the WCP includes a wireless data/control commands transmission/reception unit/wireless antenna, buffer memory for storing received data and control commands for wireless transmission, therefore performs the functionality of wireless terminal.

In response to the applicant's that the error mentioned in Uyesugi does not appear to relate to error in data transmitted from a wireless terminal.

The Examiner asserts that the feature that of allocates the wireless resource when the error occurs in the received data without informing the corresponding wireless terminal of occurrence. It is noted that the features upon which applicant relies (i.e. the kind of error) are not recited in the rejected claims. Although the claims are interpreted

in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to the applicant argument that Patel does not makeup for deficiencies of the other references, regarding claim 2.

Buchholz teaches a wireless resource allocation method in a wireless communication system including a plurality of wireless terminals and a single access point having a bridge function, the method comprising the steps of:

a) allocating a wireless resource to a corresponding wireless terminal and receiving data from said wireless terminal in said access point (col 3 lines 64-65)

b) performing a check to determine whether there is an error in said data which was received from said wireless terminal in said access point in the step (a) (col 3 lines 65-67).

c) sending an error occurrence message and allocating a wireless resource for retransmission of data to said wireless terminal simultaneously when the access point detects a data error in the step (b) (col 3 lines 67, col 4 lines 1-3). Buchholz does not show one frame comprising the down-link period and an up-link period. However Bauchot teaches that one frame comprising the down-link period and an up-link period (see figures 11, col 3 lines 10-25), in the case of error occurrence when mobile requests the base station for allocation of data transmission. Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to use the above teaching of Bauchot with Buchholz, in order to minimize the deterioration in the transmission efficiency, and reduce the delay time. Buchholz modified by Bauchot fails

to teach a wireless resource allocation method in a wireless communication system wherein the step of c) allocates the wireless resources the error occurs in the received data without informing the corresponding wireless terminal of error occurrence. However Uyesugi teaches a wireless resource allocation method in a wireless communication system wherein the step of c) allocates the wireless resources the error occurs in the received data without informing the corresponding wireless terminal of error occurrence. The base station (TSR) informs the WCP that the PC is ready to receive by setting the signal SLCT IN (SELECT INPUT) high. (Signal names and bit positions are standard parallel port designations). This setting is made at installation, and is reset whenever the TSR transitions to the IDLE mode. The WCP sends one nibble at a time, first a low-order nibble (first half of a byte), then a high-order nibble (second half of a byte). Each nibble is strobed in by setting the ACK signal low. When the TSR is triggered by the signal IRQ7, TSR sets itself in the RECEIVE mode. The TSR acknowledges each nibble by strobing it back. The BUSY, PE (paper error), SLCT OUT (SELECT OUTPUT), and ERROR status lines contain the data nibble. The TSR transmits data to WCP, frame by frame, in the following way. As soon as TSR knows that it needs to send a frame to WCP because buffer is ready, TSR informs WCP that PC is busy, setting SLCT IN signal low. The TSR also sets itself in SEND mode. TSR then strobes out a sync character FF.sub.hex with auto line feed (ALF) low. When TSR receives a hardware ACK (acknowledge) from WCP, TSR checks the SLCT OUT and PE (paper error) status lines. If the status lines are such that PE is high and SLCT OUT is low, TSR considers the handshake

a success. If the status lines do not meet this condition, the handshake fails. If the handshake succeeds, TSR strobes 8F.sub.hex to WCP, setting ALF high again. If the handshake has succeeded, TSR expects to start sending a frame when TSR receives the next hardware ACK signal. TSR is triggered to send the Nth byte of data when it receives the N-1th ACK signal. When the correct number of ACK signals has been received, TSR writes a status out to the command-status area, and reverts to IDLE mode, setting SLCT IN high. If the handshake has failed, TSR transitions to IDLE mode (col 9 lines 47-67, col 10 lines 1-7). Therefore, by combing the above teaching of Uyesugi with Buchholz modified by Bauchot, minimizing the deterioration in the transmission efficiency and adjusting the number of bit error rate attempts made to transmit each frame.

In response to the applicant argument that Patel does not makeup for deficiencies of the other references, regarding claims 4, and 6.

The Examiner asserts that Buchholz modified Bauchot and Uyesugi fails to teach a wireless resource allocation method wherein the up-link period comprises a contention period and an upload preservation period. However Patel teach a wireless resource allocation method wherein the up-link period comprises a contention period and an upload preservation period (col 3 lines 59-65-col 4 lines 1-10). Therefore, by combining the above teaching of Patel with Buchholz modified by Bauchot and Uyesugi, providing a system with less error and reducing the stages where data is manually relayed and transcribed by various service providers.

Buchholz modified by Bauchot, Uyesugi and Johnston fails a wireless resource allocation method wherein various control information includes not acknowledge information the wireless terminal transmitted to the access point during the upload reservation period of a previous frame. However Patel teaches a wireless resource allocation method wherein an acknowledge information or not acknowledge information the wireless terminal transmitted to the access point during the upload reservation period of a previous frame (col 6 lines 35-51). Therefore, by combining the above teaching of Patel with Buchholz, Bauchot and Uyesugi modified by Johnston, centrally controlling network, which reduces the cost of the telephone communication, and provides more availability of services to users, because not every service provider will have a relationship with a counterpart service provider in every other city.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. **Any responses to this action should be mailed to:**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naghmeh Mehrpour whose telephone number is 571-272-7913. The examiner can normally be reached on 8:00- 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold be reached (571) 272-7905.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NM

December 22, 2005

Marsha D Banks-Harold

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